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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/630,383	04/10/1996	PHILIPPE POULETTY	A-55320-2/BI	3596

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EXAMINER	
SCHWADRON, RONALD B	
ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/630,383	POULETTY, PHILIPPE	
	Examiner	Art Unit	
	Ron Schwadron, Ph.D.	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-22* is/are pending in the application.

4a) Of the above claim(s) *18,21 and 22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-17,19,20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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1. Claims 14-17,19,20 are under consideration.

2. Regarding priority for the claimed invention and the application of prior art, the claimed invention using folate is not disclosed in the parent applications to which priority is claimed and therefore the priority date for application of prior art is the filing date of the instant application.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 14-17,19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support in the specification as originally filed for the recitation of "wherein said conjugate members are other than antibody" in claims 14 or 19. Regarding applicants comments, the specification, page 6, lines 4-10 refers only to the portion of the moiety which binds the target **cell receptor or soluble molecule**. It does not refer to the other portion of the conjugate (eg. the selective member which is an antigen to which the host has been previously sensitized). Regarding the cited portions of the specification, page 7-8, said portion of the specification does not disclose that the effector binding portion of the conjugate is an antibody. Regarding the specification, page 9, lines 8-10, said passage does not disclose that the members of the conjugate are antibodies. Regarding the reference to "synthetic organic molecules other than the molecules already described", said limitation is limited to a disclosure wherein the molecule is a synthetic organic molecule other than the molecules already described. The disclosed molecules referred to in the beginning of the sentence, page 9, lines 8-10 include polypeptides, saccharides, lipids, nucleic acids. Thus, the "synthetic organic

molecules other than the molecules already described" would have to not be any of the aforementioned molecules and such a limitation is not currently in the claims under consideration. There is no support in the specification as originally filed for the scope of the claimed invention (eg. the claimed invention constitutes new matter).

5. Regarding the term "Gal α1-3 Gal B1-4GlcNAc-R" and the definition of "R", while said letter is not defined in the specification, based on the prior art of record (such as Galili, Immunology Today), it appears that R refers to any molecule to which the carbohydrate is attached. Therefore, an antibody containing the aforementioned carbohydrate would be encompassed by "Gal α1-3 Gal B1-4GlcNAc-R".

Regarding applicants comments about " Gal α1-3 Gal B1-4GlcNAc-R ", based on the prior art of record it appears that R refers to any molecule to which the carbohydrate is attached. Therefore, an antibody containing the aforementioned carbohydrate would be encompassed by "Gal α1-3 Gal B1-4GlcNAc-R". In addition, the specification, page 8, lines 20-23 indicates that "In reference to the "galactosyl epitope" is intended any compound that specifically binds to an antibody specific for alpha galactosyl ...". Thus, applicants arguments are repugnant to the definition of the term in applicants specification. Furthermore, the specification, page 8, lines 19-20 also indicates that Gal α1-3 Gal B1-4GlcNAc-R is the alpha-galactosyl epitope (aka that R is part of the structure).

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 14-17,19,20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kranz et al.(US Patent 5,547,668) as evidenced by Borrebaeck et al
Kranz et al. teach therapeutic conjugates containing folate covalently joined to a murine antibody (see column 4, third paragraph and column 7). Borrebaeck et al. disclose that the art recognized that murine antibodies contain alpha Gal which is bound by human anti alpha Gal antibodies(see page 477, second column). Thus, it is an inherent property of the conjugates taught by Kranz et al. that they contain the alpha Gal/ alpha galactosyl epitope. As per above, an antibody containing the aforementioned carbohydrate would be encompassed by "Gal α1-3 Gal B1-4GlcNAc-R". Kranz et al. disclose folate/Fv conjugates (see column 6, paragraphs 3 and 5). The specification page 7, first complete paragraph indicates that a Fv is a fragment of an antibody, not an antibody. Therefore, the current limitation excluding antibody does not exclude Fv which is a fragment of an antibody.

Regarding applicants comments, claim 20 as amended does not depend from claim 19. Kranz et al. disclose folate/Fv conjugates (see column 6, paragraphs 3 and 5). The specification page 7, first complete paragraph indicates that a Fv is a fragment of an antibody, not an antibody. Therefore, the current limitation excluding antibody does not exclude Fv which is a fragment of an antibody. As per above, the antibody or Fv constitutes a "alpha galactosyl epitope" as per the definition of said term in the prior art and specification.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 14-17,19,20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Pouletty (EP 0510949) in view of Kranz et al.(US Patent 5,547,668) ,Galili and prior art disclosed in the specification, page 10, lines 1-5. Applicants arguments have been considered and deemed not persuasive

Pouletty teaches a conjugate containing a target binding moiety and a selective moiety capable of binding to preformed antibodies (see claim 1). Pouletty et al. teach that the selective moiety can be an antigen to which natural antibodies exist (see column 3, last paragraph). Pouletty do not teach that the conjugate contains folate attached to "Gal α1-3 Gal B1-4GlcNAc-R". Kranz et al. teach therapeutic conjugates containing folate, wherein the folate targets the conjugate to folate receptor positive tumor cells (see abstract). Galili teaches that "Gal α1-3 Gal B1-4GlcNAc-R" is an epitope that binds natural antibodies found in humans wherein the natural antibodies are found in high concentrations in humans (see abstract). The specification discloses that methods for making "Gal α1-3 Gal B1-4GlcNAc-R" conjugates were well known in the art (see page 10, lines 1-5). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have created the claimed invention because Pouletty teaches a conjugate containing a target binding moiety and a selective moiety capable of binding to preformed antibodies whilst Kranz et al. teach therapeutic conjugates containing folate, wherein the folate targets the conjugate to folate receptor positive tumor cells and Galili teaches that "Gal α1-3 Gal B1-4GlcNAc-R" is an epitope that binds natural antibodies found in humans wherein the natural antibodies are found in high concentrations in humans. One of ordinary skill in the art would have been motivated to make the claimed invention because Pouletty et al. teach that the selective moiety can be an antigen to which natural antibodies exist whilst Galili

teaches that "Gal α1-3 Gal B1-4GlcNAc-R" is an epitope that binds natural antibodies found in humans wherein the natural antibodies are found in high concentrations in humans. One of ordinary skill in the art would have also been motivated to make the claimed invention because Kranz et al. teach therapeutic conjugates containing folate, wherein the folate targets the conjugate to folate receptor positive tumor cells.

Regarding applicants comments, Pouletty teaches that the conjugate has a target binding moiety. Kranz et al. teach that folate serves as a target binding moiety. Thus, the folate serves the same purpose in both conjugates (eg. to bind a target). Regarding applicants comments about Galili, Pouletty et al. teach that the selective moiety can be an antigen to which natural antibodies exist (see column 3, last paragraph). Galili teaches that "Gal α1-3 Gal B1-4GlcNAc-R" is an epitope that binds natural antibodies found in humans wherein the natural antibodies are found in high concentrations in humans (see abstract).

10. No claim is allowed.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ron Schwadron, Ph.D. whose telephone number is 571

272-0851. The examiner can normally be reached Monday through Thursday from 7:30am to 6:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan, can be reached at 571 272-0841. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ron Schwadron, Ph.D.
Primary Examiner
Art Unit 1644

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